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THICK-BILLED MURRES GO TO EXTREMES

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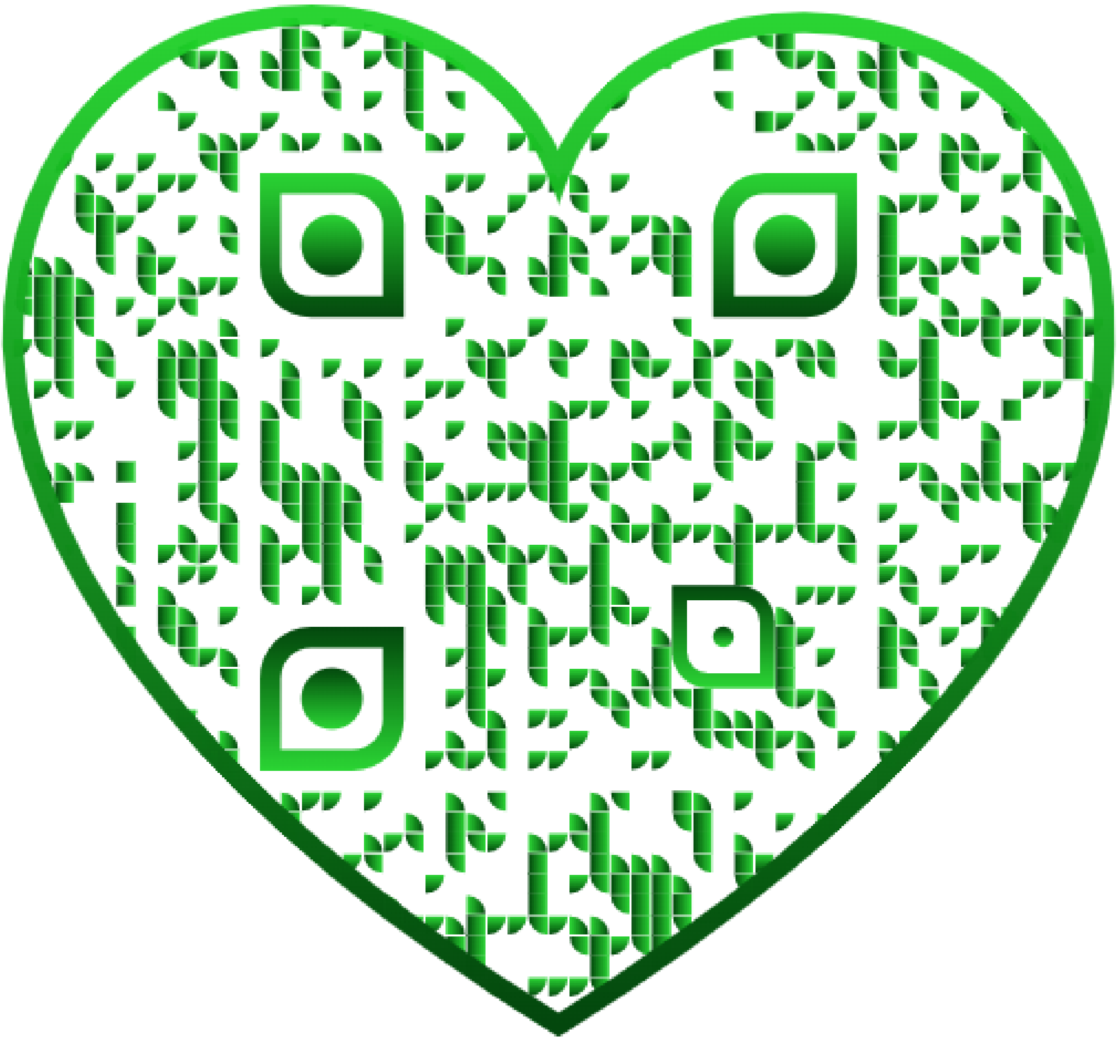
JULY + AUGUST 2025
VOLUME 31, NUMBER 3



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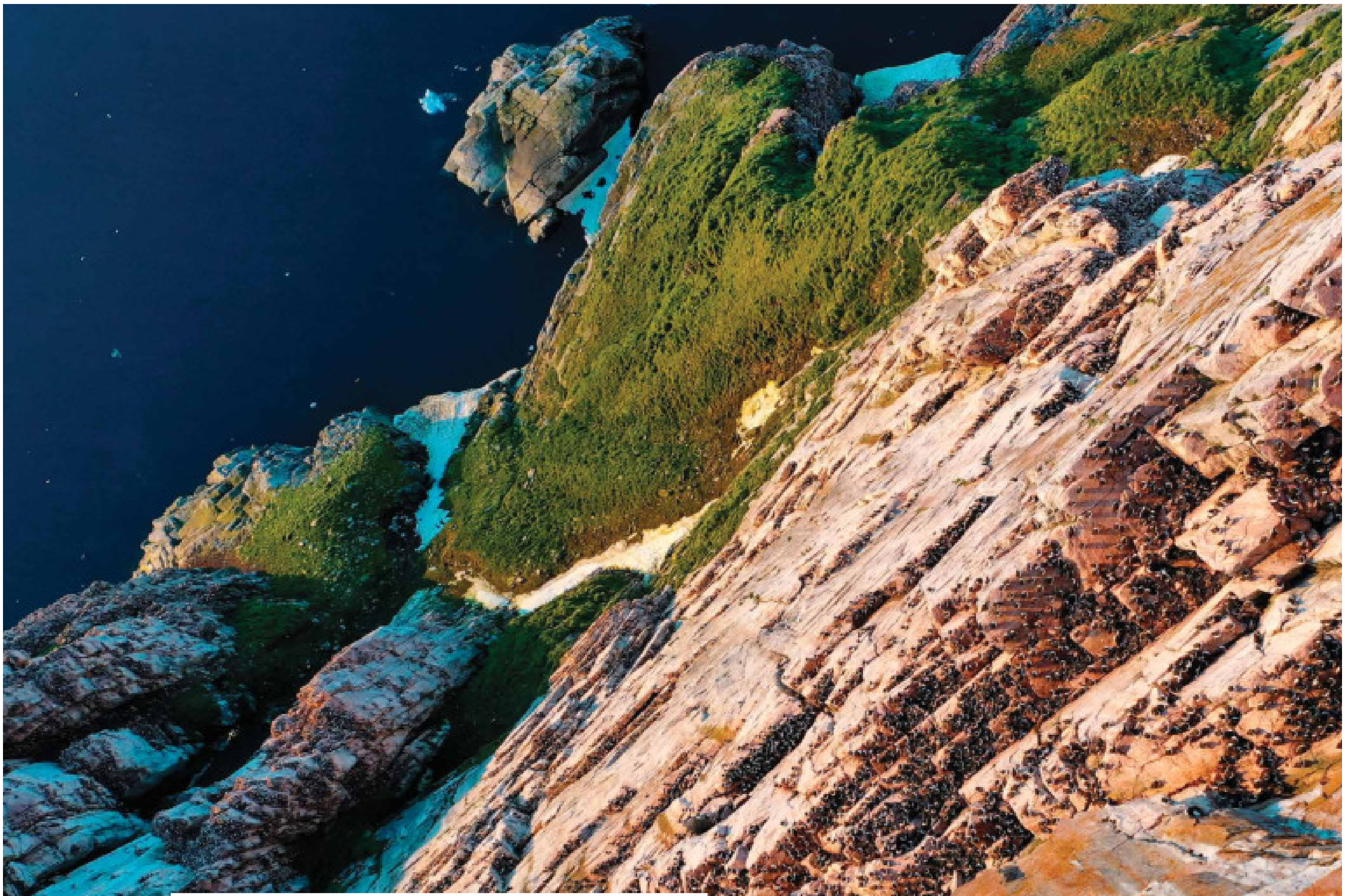


14

Life on the Precipice

Cliff-dwelling thick-billed murres fly and swim thousands of kilometres each year to reach Coats Island and points north. With rising Arctic temperatures and changing predators and prey, these remarkable cold-weather seabirds are at risk. Are they “canaries in the coal mine”?

By Kerry Banks
Photos by Douglas Noblet

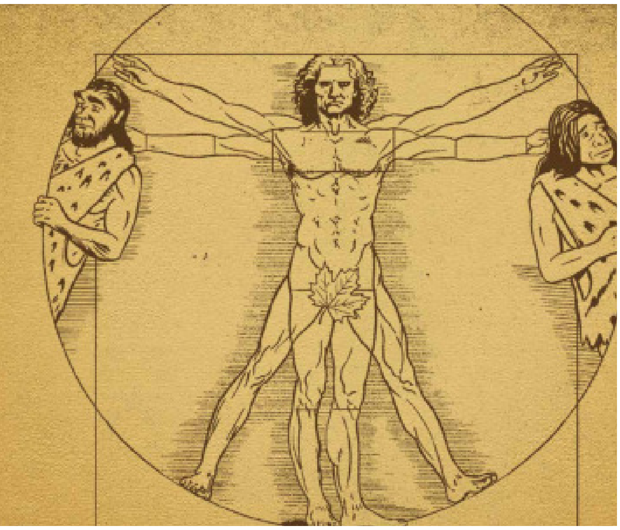
24

CWF ANNUAL CONSERVATION AWARDS

Natural Leaders

Now more than ever, the times call for public engagement and action to conserve our natural heritage. The Canadian Wildlife Federation celebrates people from across the country who are rising to the challenge, actively working to conserve wildlife

COVER: OTTO PLANTEMA / BUITEN-BEELD / ALAMY STOCK PHOTO.



Front

6 In Focus
Swift fox kits, near Foremost, Alta.
Photo by Kyla Black

9 Out There
Chestnut-collared longspur
By Wayne Lynch

10 Bigger Picture
Origin of the Specious
By Alanna Mitchell

Back

36
Birding
Turkeys gone wild
By David Bird

38
Field Guide
Solomon's seal in Montreal
By Mel Walwyn

41
Urban Wildlife
Winnipeg's monkey trails
By Matthew Church

44
Engage
News, events and updates on CWF's conservation, education and engagement projects

46
Right Here
Cape Bonavista, N.L.
Photo by Mark Gray

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Advertising inquiries:
Fred T. Ouimette
1-877-599-5777; fredo@cwf-fcf.org
Editorial inquiries:
editorial@cwf-fcf.org

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JESS DEEKS

Local Heroes

WELCOME TO OUR JULY/AUGUST ISSUE. This is the annual issue in which we celebrate the efforts of Canada's amazing conservation champions. As you explore these pages, you will discover and meet eight true Canadian heroes. Their work is impactful and insightful — it is making a difference — and we at CWF are delighted to recognize and honour their important contributions.

Our mission at CWF is clear: We work to facilitate and inspire the conservation of Canada's wildlife and habitats for the use and enjoyment of all. Our organization's goal is to help nurture nature conservation in this country by making wildlife a part of the value system of every Canadian.

At heart, our organization is about engagement, about working within communities to amplify the many impactful ways that Canadians from all walks of life both experience nature and support conservation. Many studies now show that when people connect with nature in their own way, it strengthens and deepens their commitment to conservation. Building on this powerful insight, a primary focus for CWF is to celebrate and help deepen the wide range of personal values and perspectives that people and their cultures bring to our natural world.

Always striving to achieve the highest standards in our work, CWF programs are based on best available science in combination with local values and invaluable Indigenous knowledge. Collaboration with committed partner organizations and individuals enables us to broaden our practical, solution-oriented approach, expand our reach and ensure real impact on the ground.

That's why these awards are so important to us here at CWF. Each of this year's deserving recipients embodies a profound commitment to conservation. While they're a diverse and varied group, each of these champions shares values and attributes that include a desire to contribute to a culture of conservation and care across Canada through commitment, passion, engagement and action — and in doing so, inspire others to do the same. They are leaders but they are also exemplars of the many Canadians who contribute to conservation every day.

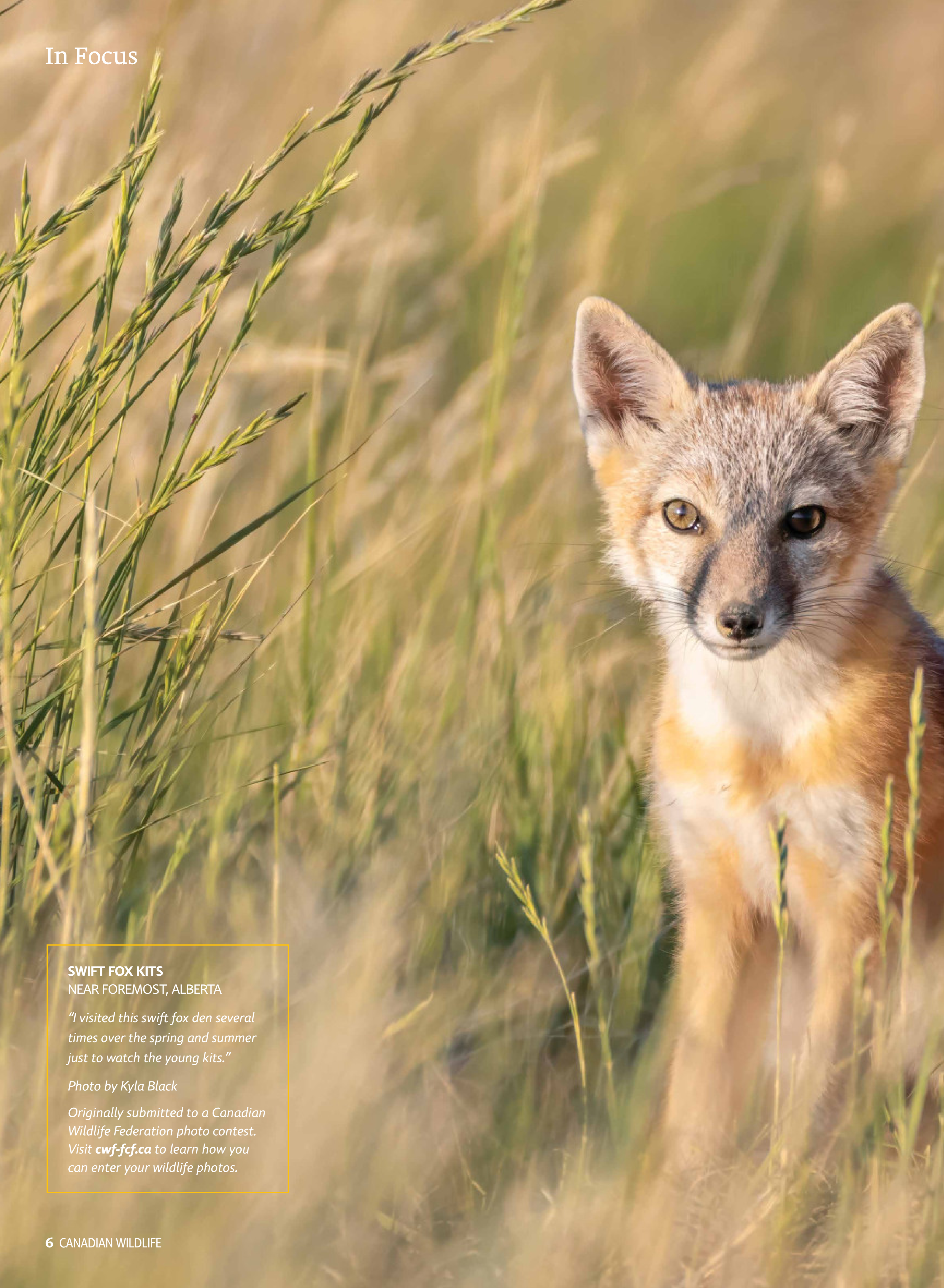
These awards are unique in Canada; nominations are generated by our supporters in every province and territory. In response to our call for nominees, suggestions pour in from across the country. This year, we received a record number, which highlights again the tremendous energy and care that people throughout Canada bring with them when they head outdoors.

This passion for conservation lies at the heart of everything we do here at CWF — and has been integral to all we do since we were launched by group of dedicated conservationists in Montreal in 1962. Over these 60+ years, we have maintained this powerful commitment to ensuring everyone in Canada is involved, not just experiencing and savouring Canada's exceptional wild spaces, but in working to conserve it for future generations. Our commitment will always be a key part of everything we do and care about at CWF.

One final note: this month, CWF will say farewell to two individuals who have played pivotal roles in making this magazine the engaging and valuable resource it is. I am sorry to say that, after 15 excellent years with the organization, Pam Logan, CWF's energetic and enthusiastic director of marketing and communications, is retiring. We will miss her perspective and commitment. The issue also marks the departure of this magazine's editor-in-chief, Matthew Church, after eight years producing 50 editions of *Canadian Wildlife* and our French sister publication *Biosphère*. We thank him for his creativity and enthusiasm.

Finally, please join me in offering congratulations and appreciation to the eight deserving, inspiring CWF conservation award recipients of 2025.

Sean Southey
Chief Executive Officer, CWF



SWIFT FOX KITS
NEAR FOREMOST, ALBERTA

"I visited this swift fox den several times over the spring and summer just to watch the young kits."

Photo by Kyla Black

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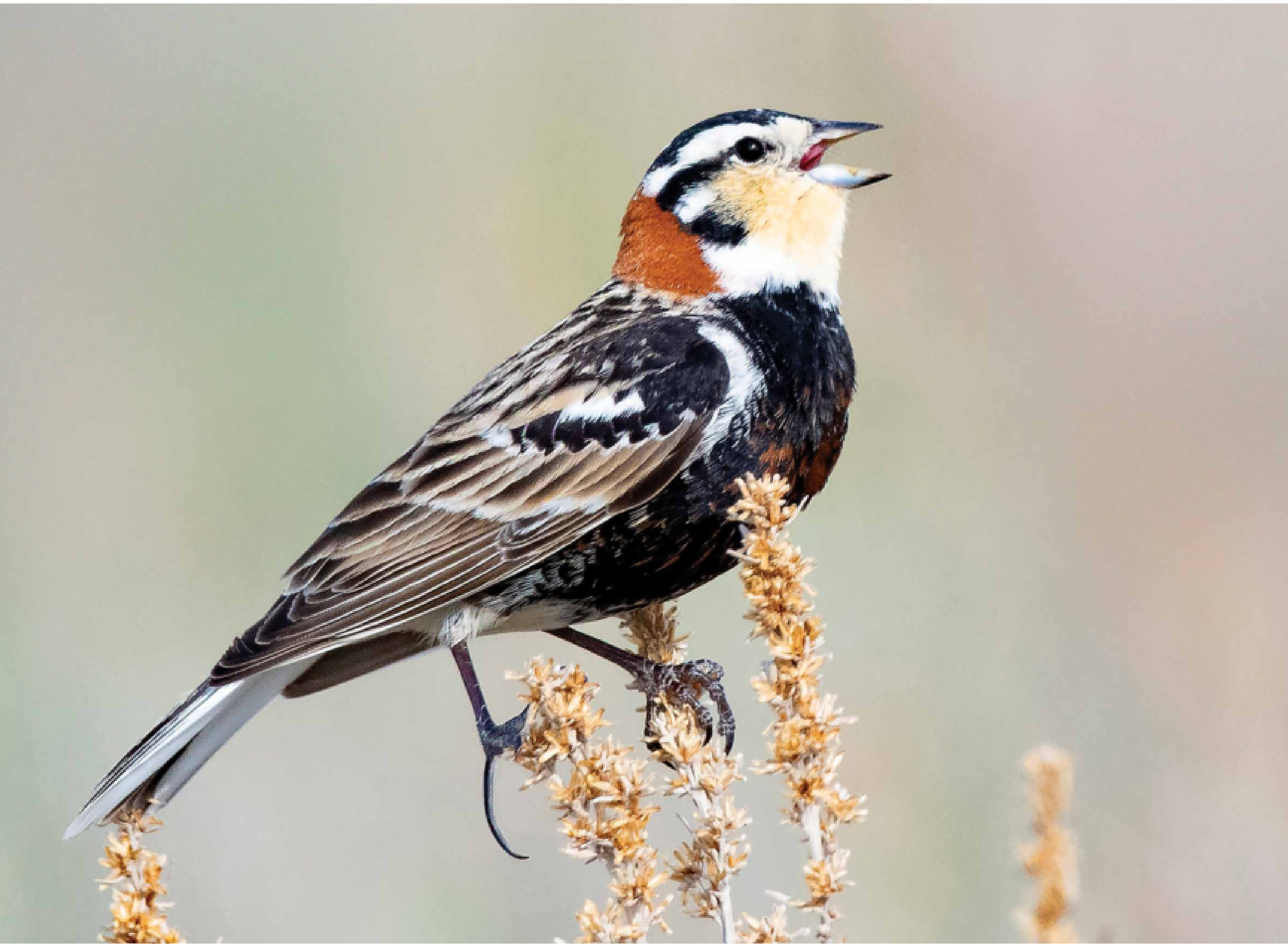


WAYNE LYNCH.

CHESTNUT-COLLARED LONGSPUR

SCIENTIFIC NAME
Calcarius ornatus

REGION
Southern Alberta east to southwestern Manitoba

CONSERVATION STATUS
Endangered

WHY SO SPECIAL?
One of the most endangered birds in Canada

THE CHESTNUT-COLLARED LONGSPUR GETS ITS NAME FROM THE elongated hind claw (or "spur") — the purpose of which is unclear — it has on both of its feet. This handsome member of the bunting family is a typical bird of the dry northern plains. It frequently walks or runs on the ground searching for seeds, although during the summer it also hunts beetles, crickets and grasshoppers.

As is common with many songbirds nesting on the treeless prairies, the male chestnut-collared longspur advertises his ownership of a patch of real estate with a melodious song given on the wing, hoping to intimidate rivals while luring a prospective mate.

Today, grassland birds are the most rapidly disappearing group of birds in North America. In 2024, Environment and Climate Change Canada reported that grassland birds in Canada have suffered a 67 per cent decline since 1970. The report warned "Canada's grassland birds are running out of time. The native grasslands on which they depend are the most endangered habitat in the country, putting these birds at the epicentre of a conservation crisis." A century ago, before much of our native grasslands fell victim to the plough, the chestnut-collared longspur was one of the most common birds on the Canadian Prairie grasslands. Alarmingly, its numbers have since declined by more than 95 per cent, and this attractive Prairie songbird is now designated as endangered in Canada.—**WAYNE LYNCH**

ON THE ORIGIN OF SPECIOUS

The work of digging up our human ancestry and understanding our evolution often clashes with prevailing politics

By Alanna Mitchell Illustration Pete Ryan

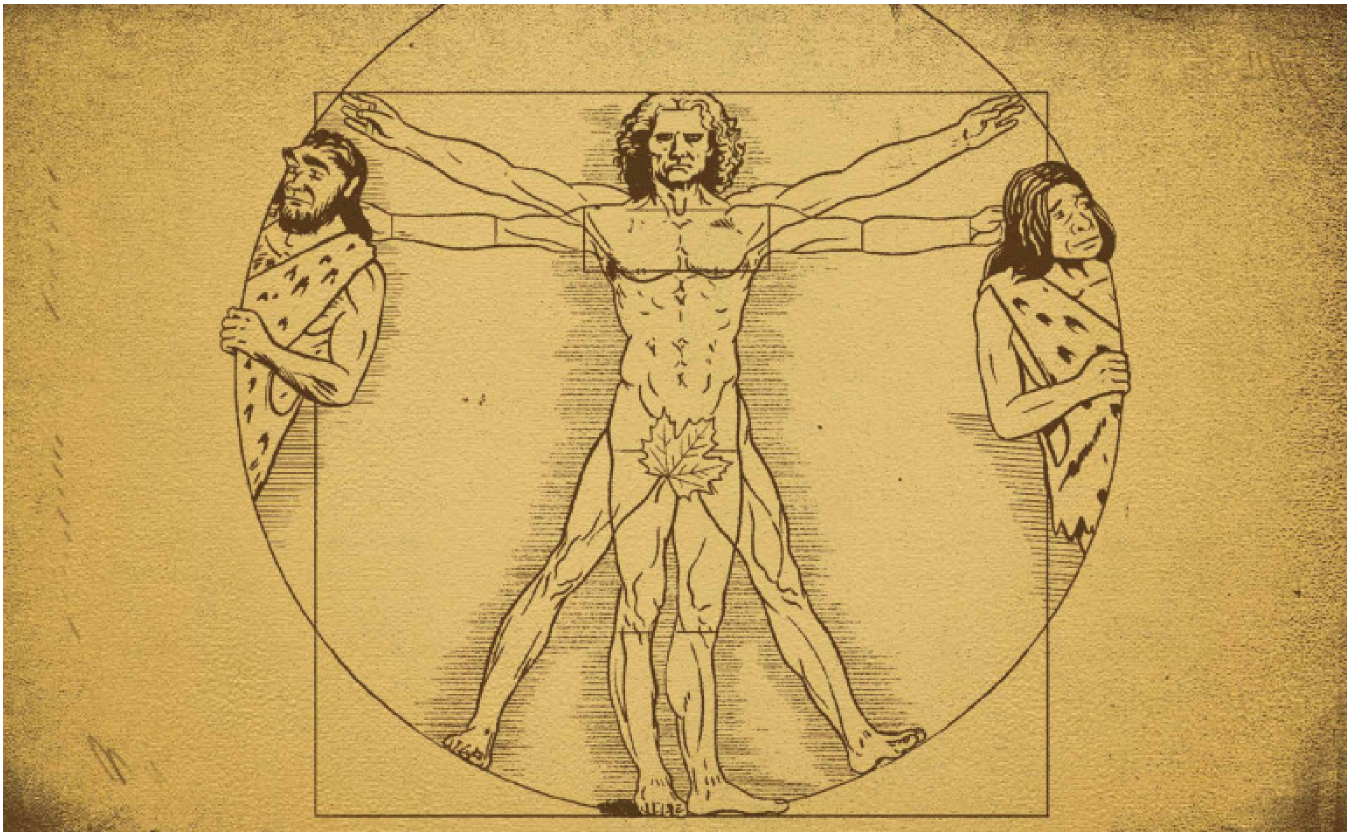
TWO DAYS BEFORE CHRISTMAS IN 1924, a young Australian anatomist working in South Africa used his wife's knitting needles to prise a fossil skull not much bigger than his hand from a chunk of rock. A human-like baby's face popped out with a full set of milk teeth, alongside a cast of the surface of the child's brain. The fossil showed a combination of humanoid and ape-like characteristics that had never before been seen.

Just weeks later, in February 1925, the anatomist Raymond Dart published a paper on the find in *Nature*. Uproar ensued. A century on, the episode continues to offer us lessons about the complex role of science in society.

The skull was that of the Taung Child, our ancient human ancestor and the first example of a new species called *Australopithecus africanus*. Dart, who was trying to solve the enduring puzzle of how and when our species, *Homo sapiens*, came to be, saw the fossil as the best evidence until then that we and our ancestors evolved in Africa.

Colleagues were scandalized. At that time, many leading white paleoanthropologists wanted to believe that Britain was the cradle of humanity, or perhaps Indonesia was. The idea that we came out of Africa was a blow to racist notions of the day. When Dart tried later to publish a book on his findings, the grand old men of the field suppressed it.

But it wasn't only scientists who attacked Dart. The idea that humans and apes had a common ancestor was a political hot potato, too. Just months after Dart published his paper, the so-called Scopes Monkey Trial began in Tennessee. That state had made it illegal to teach human evolution in any school it funded and pitted people who accepted Charles Darwin's theory of evolution against those who said no scientific finding could be correct that the Bible contradicted.



SCIENCE IS UNDER ATTACK IN SYSTEMIC WAYS THAT HAVE LESS TO DO WITH OUR ORIGINS THAN WITH OUR FUTURE

High school teacher John T. Scopes was found guilty, but the verdict ended up overturned on a technicality. Dart, in the meantime, was getting letters from Bible literalists telling him he would burn in hell.

Dart was eventually vindicated. Since then, and especially in the past 20 years, fossil finds have piled up inexorably in Africa, Asia, Europe and Oceania, along with more precise ways to measure how old they are and to peer inside their DNA. It's become ever more plain that our species evolved in Africa.

But we evolved there in ways far more complex, chancy and jumbled than Dart and his colleagues knew at the time. Parsing of the time-stamp clues in our DNA suggests that our ancient human ancestor nearly died out about 800,000 years ago, leaving just 1,300 breeding individuals. They rallied and kept evolving, and then their descendants spread to other parts of the world. Our species shared this planet with at least three other human-like cousins for 100,000 years, minimum. We interbred with at least two of them — Neanderthals and Denisovans — whose genes we carry within us today.

The point is that science comes immersed in a geopolitical and cultural stew. The paleoanthropologist John Hawks of the University of Wisconsin-Madison writes in his blog about the fraught exhibit of 40 of these humanoid fossils, including the Taung Child, at New York's American Museum of Natural History in 1984. Zambia refused to take part until its own hominin fossils had been repatriated from Europe. The Netherlands withdrew Indonesian fossils in a mark of atonement for its colonial legacy. American proponents of creationism threatened protests.

The exhibit went on anyway, the largest public collection of fossils of our ancestors ever exhibited. Half a million saw it. It marked an unparalleled, emotional chance for both scientists and the public to see the evidence behind these powerful stories of how we came to be.

Today, science is under attack in systemic ways that have less to do with our origins than with our future. As I write this, U.S. President Donald Trump has frozen or cancelled at least US$6 billion in research grants and contracts at universities and has taken a sledgehammer to important government research agencies, including the National Oceanic and Atmospheric Agency. European research institutes and private organizations are racing to save decades worth of its data on climate disruption.

It's the impulse to deprive us of, as the late American physicist Richard Feynman put it, the pleasure of finding things out that worries me the most. That, and the knowledge that if a scientifically sound story is not available, humans — so inventive, so messy — are bound to find another to take its place.

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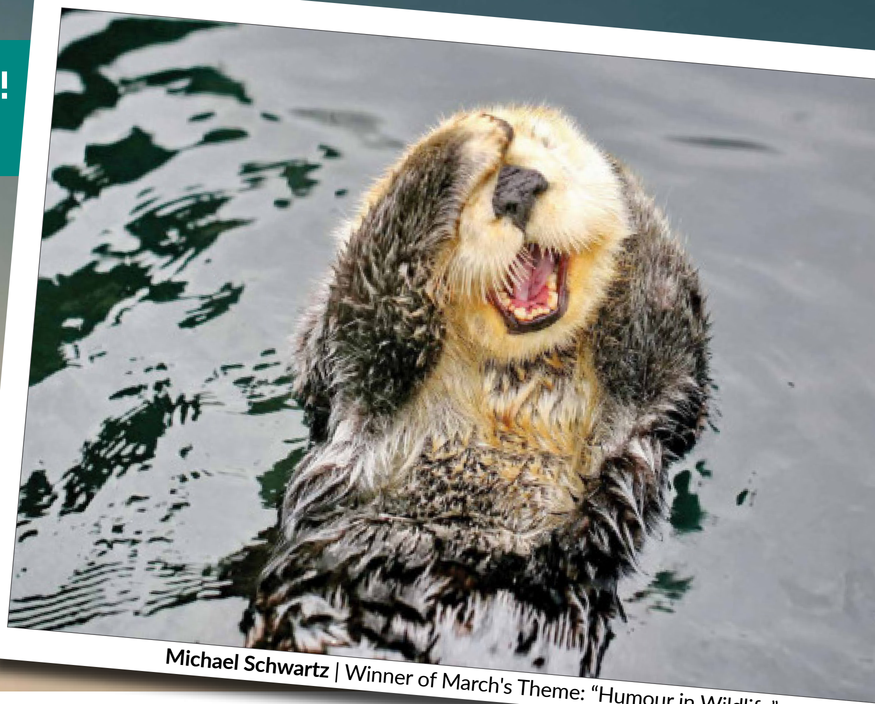
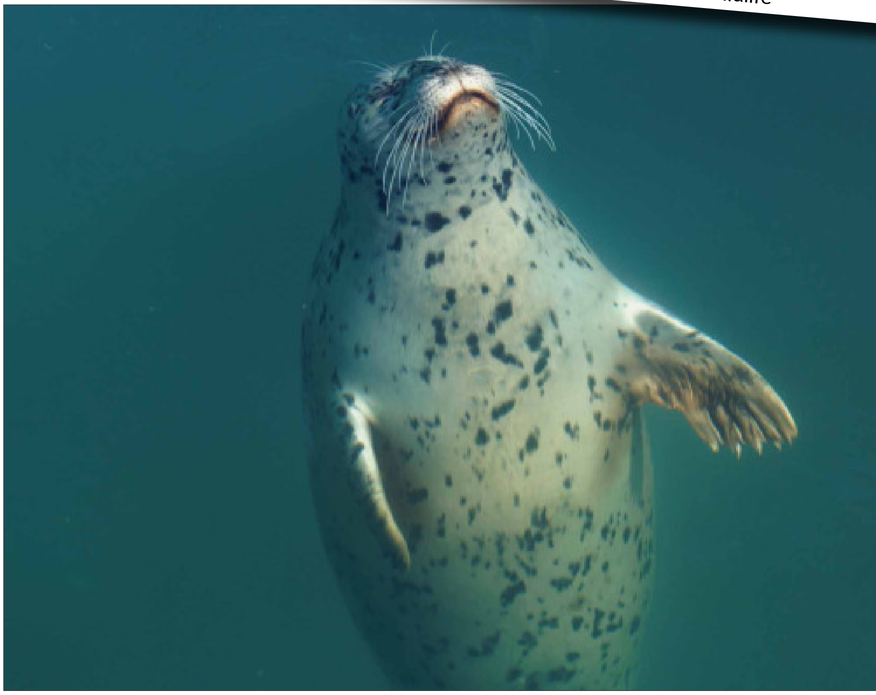


Michael Schwartz | Winner of March's Theme: “Humour in Wildlife”



Nancy Ross | Winner of April’s Theme: “Happy Moment”

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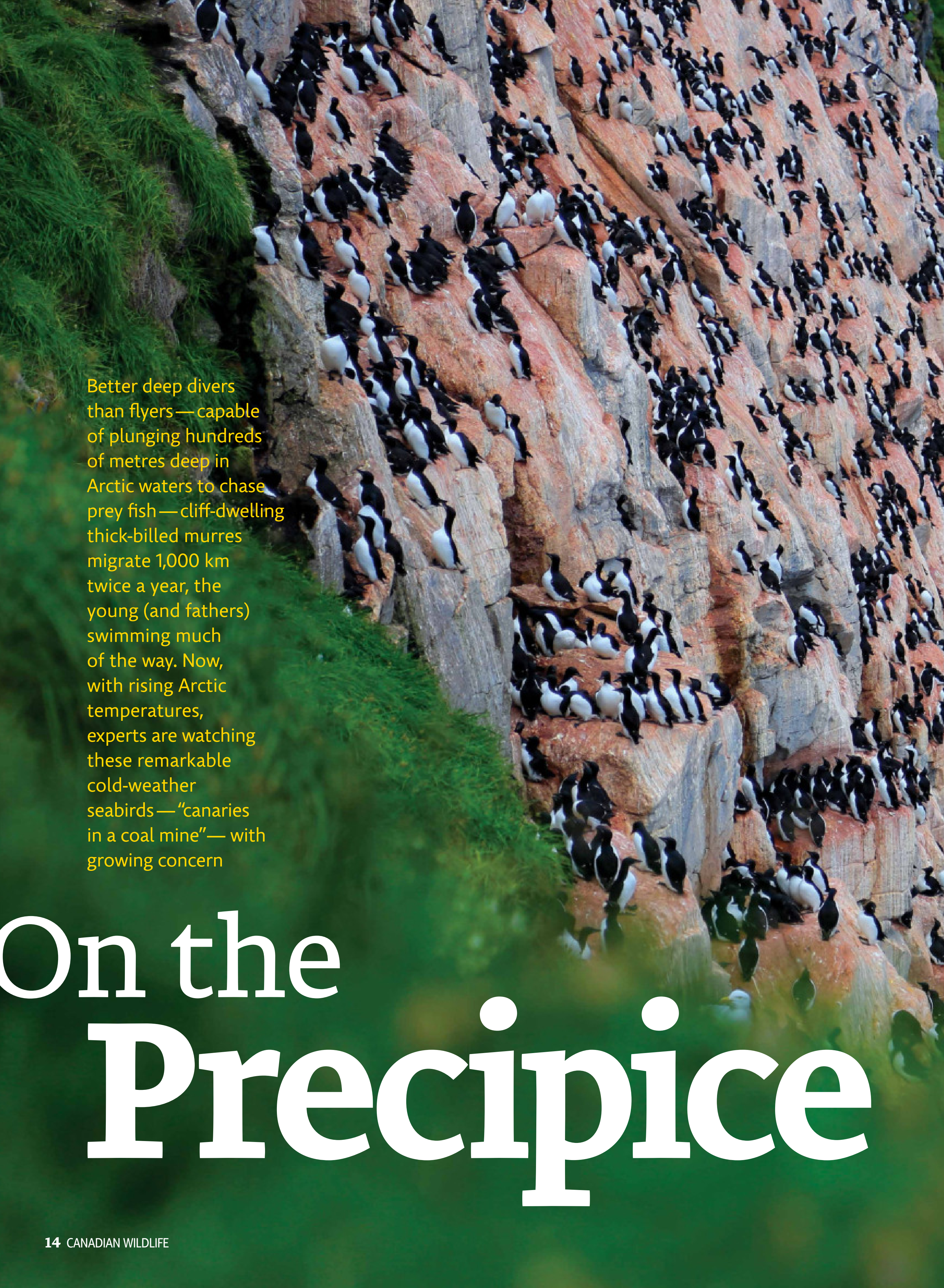


On the Precipice

Better deep divers than flyers — capable of plunging hundreds of metres deep in Arctic waters to chase prey fish — cliff-dwelling thick-billed murres migrate 1,000 km twice a year, the young (and fathers) swimming much of the way. Now, with rising Arctic temperatures, experts are watching these remarkable cold-weather seabirds — “canaries in a coal mine” — with growing concern

Sheer numbers: *Coats Island offers scientists an ideal vantage on the state of our Arctic murre populations*

By Kerry Banks
Photos by Douglas Noblet

LATE IN JUNE EACH YEAR, A SMALL group of Canadian scientists, one or two Inuit armed guides and a couple of expert rock climbers fly to Coats Island at the northern tip of Hudson Bay. After arriving on the large windswept expanse of rock, they must ascend to a cabin atop a 100-metre cliff. For the next six weeks, each morning the team follows the same routine: climbing down the cliffside to crawl into wooden blinds lashed by ropes to the sides of the cliff, where they spend the day suspended, watching. They come all this way and endure these gut-clenching observations for one reason: to get as close as possible to the island's annual gathering of 30,000 breeding pairs of thick-billed murres.

Researchers have been coming here regularly for 41 years. The focus of their attention is *Uria lomvia*, a stocky, 30-cm-tall seabird with black feathers on its back and head, white feathers on its chest and a distinctive white slash on its dagger-like black upper bill. It is the largest member of the Alcidae family, a group that includes auklets, puffins, razorbills and murrelets.

Thick-billed murres are the deepest-diving flying birds in the world, capable of plummeting 200 metres below the surface of the water in less than a minute in search of fish. On land, they are far less agile but no less remarkable: they nest on narrow cliff ledges, as many as 20 pairs crammed into a single square metre, snuffling and preening, filling the air with guttural croaks and wheezes that sound like an old woman alternatively laughing and blowing her nose.

The scene packs a visceral impact, admits Kyle Elliott, an ornithologist from McGill University who has led numerous study groups to Coats Island. "We are perched on a narrow ledge high above the vast ocean, surrounded by thousands of birds flying back and forth, immersed in the smell of thousands of years of accumulated guano and the cries of the murres — waves of 'urrs' and 'pas' coming across in definite pulses."

Of the 10 thick-billed murre nesting colonies — known as loomeries — in the Canadian Arctic, Coats Island is one of the smaller ones. The two most massive loomeries are each home annually to more than a million birds.

Coats Island was selected as a research site by the Canadian Wildlife Service back in 1984 because of its ideal terrain for observations. The solid

Deep dives, high climbs: *Arctic murres fish 200 m below surface; humans observe 200 m above*

COATS ISLAND OFFERS A GLIMPSE INTO THE FUTURE. THE SIGNS ARE TROUBLING: THESE MURRES' DIET AND BEHAVIOUR ARE CHANGING. SO ARE THE PREDATORS

Walrus in the bay below the colony. Opposite, top: Arctic fox raiding a nest. At bottom: murre chick emerges

rock cliffs are stable and climbable, their faces criss-crossed by narrow ledges. Sitting among them in blinds, the researchers can observe the busy murres at close range, identifying the prey being delivered to chicks, and watching for and recording band numbers and other crucial information.

In recent years, the island's location at the southern limit of the murre's nesting range has become increasingly important for another reason: climate change.

"The Arctic ecosystem is disappearing. We have lost half the summer sea ice in a generation. Studying Arctic seabirds at their receding southern range limit is important to understand how these changes are impacting wildlife," says Elliott. "The murres are canaries in the coal mine for the entire Arctic ecosystem… an easy signal to observe and hear about what is changing and what that means about the future of the Arctic."

If Coats Island's state offers a glimpse into the future, then the signs are troubling. In recent years, researchers have noted changes in the murres' diet and behaviour in response to changes in their environment. Now the species is facing new threats from rising temperatures, previously unheard-of mosquitos and desperate, marauding polar bears.

From afar, one might assume there is no cause for alarm. After all, the two murre species, the thick-billed and the common (*Uria aalge*), are among the most numerous seabirds in the northern hemisphere. While common murres inhabit the southern, ice-free zones of Canada's Atlantic and Pacific coasts, thick-billed murres are circumpolar, inhabiting the northernmost reaches of the Arctic coasts and islands. More than one million common murres and about three million thick-billed murres breed in Canada (representing about 7 per cent and 16 per cent, respectively, of the world populations).

This despite the impact of a legal hunt in their wintering grounds off Newfoundland and Labrador, which for decades was killing an estimated 700,000 murres a year. When Newfoundland joined Canada in 1949, a special provision was put in place under the Migratory Birds Convention to allow Newfoundlanders to continue to harvest murres during the winter. The birds had been long-valued as a food source (though it's hard to understand why; the meat is dark and oily, requires two or three hours of cooking before it is tender enough to eat and has a strong aftertaste). By the 1980s, concern about the scale of the slaughter led to tighter hunting regulations. Today, there is a 20-bird limit for each hunter per day and a 40-bird limit on how many a hunter can possess at one time. The hunt continues still, taking somewhere between 60,000 and 120,000 murres each year.

The Canadian Wildlife Service operated the Coats Island site until 2013, but the site is now run by Environment and Climate Change Canada, in concert with the McGill and McMaster universities. Crews of scientists rotate through, focusing on how things are changing, be it what the birds are eating, their mating behaviours, their numbers or even their physiology. Each researcher is assigned a plot on the cliffside to monitor, which includes occasionally clambering out on a ledge to take blood and DNA samples, or to attach identifying bands to the birds' feet and tiny geolocators to their bodies to track their movements once they leave the site.

In typical years, some 80 to 90 per cent of Coats Island murres return to breed. At least that was true until 2024, when the numbers tumbled to 50 per cent, the lowest ever recorded. "We think something happened to the birds during the winter, some event in the ocean," says Marianne Gousy-Leblanc, a PhD student at McGill University who is studying the murres' genetics and mate selection. "We're hopeful it was just a one-year occurrence and not the start of a new pattern."

For Elliott, this population drop is felt intently. "I spend months watching murres each year and get to know them very well as individuals.

Researchers take up temporary residence on Coats Island. Each is assigned a plot on the cliff to observe, take DNA samples, and attach identifying bands and tiny geolocators

This would be impossible without their remarkably large breast muscles, which account for a quarter of their total body weight.

In the past, the murres fed largely on Arctic cod, a fatty, cold-water fish that is central to the region's ecosystem. In recent years though, their diet has shifted to about 50 per cent capelin, a smaller, less nutritious fish that has moved in from the North Atlantic. Scientists theorize that this increased dependence on capelin may be responsible for a trend of smaller chick sizes that has been tracked at Coats.

A close bond develops," he says. "I can remember the Wayne Gretzky bird [named because its band colours matched the colours of the Edmonton Oilers hockey team] that came back year after year... And I remember another male that was a very caring mate, always preening its partner. I grieve when an individual that I have known for 20 years does not come back."

However, even without having a close personal relationship with a murre, one can still admire their talents and fortitude. Although sometimes referred to as "the penguins of the north," these birds can fly as well as dive. With their heavy bodies and stubby wings, they are not graceful in the air yet will fly in V-shaped flocks searching for food an average of four hours a day, routinely covering 60 kilometres in search of good feeding grounds.

Thick-billed murres spend most of their lives at sea foraging in frigid waters. They can dive 200 metres below the surface of the water and stay submerged for more than three minutes. It is underwater where thick-billed murres excel, plunging down in search of fish, shrimp, crustaceans and molluscs. Awkward on land and slow in the air, they are agile, swift, even graceful when pursuing fish underwater. They "soar" beneath the surface, using their wings for propulsion, their feet for steering and their bills to capture prey.

One of the more remarkable traits of thick-billed murres is their fidelity to nesting sites. Four years after being hatched, the chicks will return to start their own family within just a few metres of where they themselves were hatched. "All the birds on a ledge will be related to one another," says Grant Gilchrist, an Arctic seabird biologist with Environment Canada who has made several visits to Coats. "So, even in a colony of a million birds, it's not a random association of individuals. They are nesting with their relatives, which is quite remarkable." Researchers do not understand how they manage it.

Another mystery is how males and females identify one another. As Gousy-Leblanc notes, "They're the same size. They all look the same. What causes them to pick a partner?" Initial investigations suggest it could be connected to foraging behaviour. "The birds may try to pick a partner with a different foraging strategy. One who feeds close by will link up with one that feeds far away."

If successful in raising chicks, the males and females often remain bonded for life, returning to the same ledge each year to lay and care for one large egg. During the four-week incubation period, they take turns sitting on the egg while the other feeds out at sea. Parent birds have a "brood patch" of bare skin on their bellies that is placed against the egg to transfer as much heat to it as possible. They don't construct a nest. The egg sits in a pile of pebbles or other debris, cemented in place by the birds' poop. The eggs are round at one end and pointy at the other, a shape that means that if they are dislodged, they will roll in a circle instead of off the cliff.

Amazingly, the chicks exchange calls with the parents even before hatching, beginning with short peeps. Longer, multiple-frequency calls develop quickly after hatching. Chicks leave the nest after about 20 days. Since they are still incapable of flight at this point, they throw themselves off the cliff and glide down into the sea. The fledgling's father glides down next to them, as the chicks cheep repeatedly. These leaps of faith usually happen in groups on days when the wind is low and the waves are calm. They also occur frequently at nighttime, seemingly to avoid the predatory glaucous gulls that stalk the colony by day.

FOUR YEARS AFTER BEING HATCHED, THICK-BILLED MURRES RETURN TO START THEIR FAMILY WITHIN JUST A FEW METRES OF WHERE THEY THEMSELVES WERE HATCHED

Twenty per cent of chicks do not survive their first "flight"

Coats Island studies reveal that about 20 per cent of chicks don't survive their first "flight," most often when they are separated from their father, either by falling off the ledge or striking cliff ledges on their descent. Chicks that make it down alone are frequently drowned by aggressive adult murres.

After hitting the water, the chicks begin a taxing migration. Swimming alongside their fathers, they will head east to the Atlantic Ocean and then turn southward, travelling up to 1,000 kilometres or more. Eventually, flight feathers develop and they can then fly farther south to their wintering grounds off Labrador. Meanwhile, the females usually hang around the nesting site for a while longer before flying back south for the winter.

Egg hatching also has been hurt by climate change. Heat-absorbent black feathers that help murres survive the Arctic cold are now overheating them in the sun. In the past few years, biologists have recorded summer temperatures climbing to nearly 40 C on the cliffs, causing murres to die of heat stroke on their nests. Such is their innate drive to procreate that the adults stay atop the egg to the end because leaving to get somewhere cooler would leave the egg vulnerable to a predatory gull.

According to Emily Choy, an assistant professor of biology at McMaster University, some thick-billed murres begin to suffer heat stress at 20 C. Choy was the lead author of a 2021 study that examined the murres' ability to regulate their body temperature. "We discovered that the murres have the lowest cooling efficiency ever reported in birds, which means they have an extremely poor ability to dissipate, or lose, heat," she says. The study, published in the *Journal of Experimental Biology*, is the first to examine heat stress in large Arctic seabirds.

Like the thick-billed murre, the common murre has also suffered from the vicissitudes of rising temperatures. From 2014 to 2016, about four million murres — half of Alaska's population — starved to death during a prolonged marine heat wave, the largest documented wildlife mortality event in the modern era. As ocean temperatures in Alaska rose, the murres' food supply dwindled, along with one of their primary prey, Pacific cod, plunging by 80 per cent between 2013 and 2017.

In addition to rising temperatures, the murres at Coats face two new threats. One is mosquitos. The warmer temperatures and earlier melting of the sea ice create pools of stagnant water for mosquitos to lay their eggs in, and by July they form huge buzzing clouds that bother both the researchers and the birds. The scientists can don protective gear, but the birds are defenseless. "They bite the murres' eyes and attack their feet. We see hundreds of mosquitos on the chicks," says Gousey-Leblanc.

The other menace is polar bears. In the past, the bears would still be out hunting seals on the ice floes when the murres lay their eggs. But today, with the sea ice receding, the bears are coming ashore earlier. Some find their way to the murre colony. Surprisingly agile for their size, they will climb up on the ledges and begin a wholesale slaughter of eggs and birds.

What lies ahead for Canada's thick-billed murres? The declining population patterns for thick-billed murres in Europe are raising alarms. "They are faring poorly in Svalbard, Norway, and Greenland. In Svalbard, they are being replaced by the common murre, which is a temperate species. We are concerned that might mean those declines are imminent in Canada," says Elliott.

If, or when, that wave hits Canada's Arctic, the murres at Coats and other sites in the southern end of their range will be the first casualties. For the moment, however, this is just speculation. The surveys that Elliott and his crew will conduct this summer may yield some clues, but for now, it appears that the murres are falling victim to a cruel twist of fate. It is highly unlikely they would ever abandon this nesting site, which has been a haven for tens of thousands of years. Chained to these cliffs by dint of evolution and genetics, thick-billed murres may be doomed by the relentless advance of global warming.

An award-winning freelance writer based in British Columbia, **Kerry Banks** is a regular contributor to *Canadian Wildlife* magazine

WHEN IT COMES TO LOVE, ACTIONS SPEAK LOUDER THAN WORDS

Show your lake you care with these simple tips

In love, it's the little things we do that makes a difference. The same is true when you love your lake! Any of our tips will have a positive and lasting impact on the health of your shoreline and your lake. Not only will you benefit from a cleaner and healthier lake, but so will future generations and wildlife.

SIMPLE WAYS TO LOVE YOUR LAKE:

- Create a shoreline buffer using native trees, shrubs, grasses and other plants
- Eliminate the use of fertilizers and pesticides that could wind up in your lake
- Leave natural features like fallen trees and aquatic vegetation where they are when safe to do so. Besides, removing them could require a permit!
- Ensure your septic system is working properly and is well maintained
- Plant native vegetation on the land-ward side of retaining walls to help filter runoff

Photo: CWF

Love Your Lake

Find out if your lake participated in the Love Your Lake program and download your free personalized property report. Visit **LoveYourLake.ca**.

The Love Your Lake program is coordinated by

CANADIAN WILDLIFE FEDERATION

Watersheds CANADA

2025

CANADIAN CONSERVATION ACHIEVEMENT AWARDS

natural leaders

Now more than ever, the times call for public engagement and action to conserve our natural heritage. There is much to be done. And people from across the country are rising to the challenge, actively working to conserve wildlife

Across the country, record numbers are coming out to pull invasives from rights-of-way, clear clogged and littered waterways, ferry turtles across lethal expanses of roadway and join native plantings in support of pollinators. And more Canadians than ever are using their smartphones to become "community scientists," contributing useful, actionable data about wildlife species numbers and distribution, deepening the perspective on local *and* global biodiversity.

The eight people honoured by CWF who are featured here in these pages (and the groups and organizations they are part of) are worthy representatives of this move outdoors. They represent tens of thousands more like them across the country who have decided to get involved.

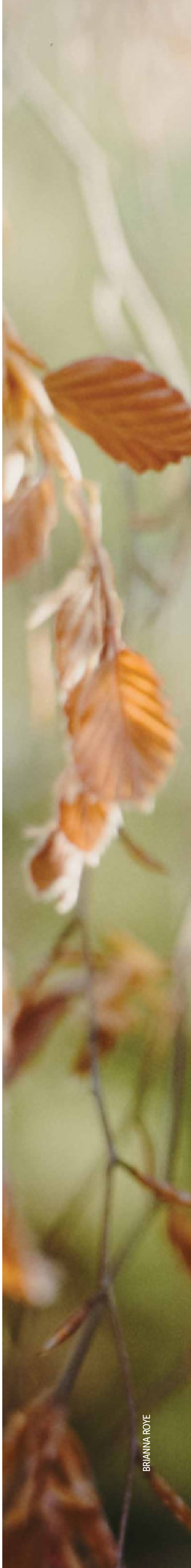
CWF established the awards program in 1975 to recognize leadership outdoors. The program expanded each decade, and more than 180 awards have now been presented in total, acknowledging the various avenues driving positive change — such as research, education, youth, arts and legislation. Today, with more than 800 species at risk of extinction in Canada, recognizing and supporting these efforts is more important than ever. Thankfully, there is hope.

Getting involved in a conservation cause of any kind is the most effective way most of us can contribute. Not only does the important work on the ground get done by you and others like you, but these grass-roots efforts drive environmental progress.

What's more, enthusiasm is catching: the actions of one volunteer inspire another who brings another. Conversations with family and friends bring more out. Awareness is raised. A community coalesces around an important homegrown cause. Local businesses lend their support. The numbers grow. The benefits grow too: the river runs clear and fish thrive again, turtles cross the road safely and the pollinators have their corridors.

Our efforts to conserve local wildlife is important, rewarding work for the future.

Visit **CanadianWildlifeFederation.ca** to learn how you can make a difference in your community



BRIANNA ROYE

Demiesha Dennis is the 2025 Roderick Haig-Brown Award winner (see p. 34)

WILD EDUCATOR OF THE YEAR AWARD

Billie Jo **Reid**

→ WILD Education facilitator, Canadian Wildlife Federation
→ Project WET coordinator and facilitator, Canadian Water Resources Association

WHAT THE NOMINATORS SAID

As a longtime WILD Education facilitator with the Canadian Wildlife Federation, Billie Jo Reid is a trusted collaborator. In the past few years alone, she has trained more than 100 educators in CWF's Project WILD and Below Zero programs, including multiple cohorts of pre-service teachers at Brock University and the University of Calgary. Her professionalism and work ethic are unmatched, and she truly has become a rock, both for CWF and for others in the environmental educator community.

Love of nature is a defining aspect of Billie Jo. The moment you meet her, you can feel her passion, energy and joy. In fact, when it comes to environmental education, you could say that she herself is a true force of nature.

As a seasoned outdoor education professional with more than 25 years of experience in both formal and non-formal education settings, Billie Jo has a rare ability to connect people with nature. Her energy and passion for the environment are boundless, whether she is facilitating professional development training for teachers or leading a group of students on a nature-journaling walk. Her natural charisma comes from doing what she loves, and her interactive and innovative teaching style is infectious.

Billie Jo is a light. She shines bright and does not hesitate to share her light with others. A true ambassador for environmental education in her community and across Canada, she is highly deserving of this award.

IN HER OWN WORDS

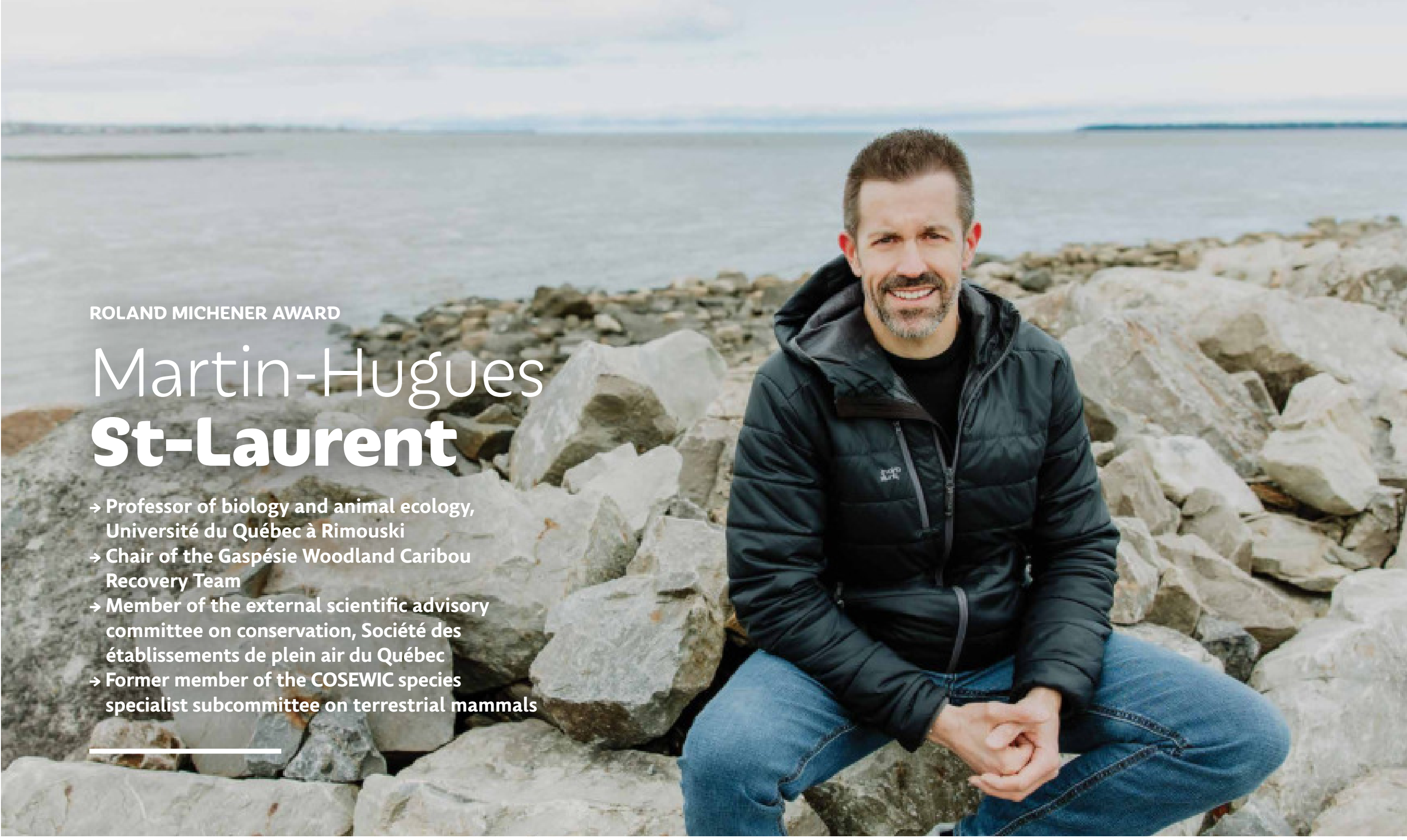
Ever since I was little, I had a deep connection to the outdoors and loved spending time outside.

I love sharing my passion with others and helping them to find their own connection to the natural world. This is all the motivation I need to continue educating and protecting the environment.

Growing up, I spent a lot of time outdoors exploring with family and friends. The biggest catalyst was in high school when I was asked to be a part of the environmental leadership program run by Bill Mitchell in Madoc, Ontario. This is where I was introduced to Project WILD, Focus on Forest and Fishways. "Mitch" gave me the opportunity to step out of my comfort zone and try things I had never done before, including canoeing and canoe tripping.

Established in 2015, this award honours an exceptional WILD Education facilitator or instructor who provides innovative and meaningful experiences for youth that focus on wildlife and the building of a conservation ethic.

JOEL RODRIGUEZ



ROLAND MICHENER AWARD

Martin-Hugues **St-Laurent**

- **Professor of biology and animal ecology, Université du Québec à Rimouski**
- **Chair of the Gaspésie Woodland Caribou Recovery Team**
- **Member of the external scientific advisory committee on conservation, Société des établissements de plein air du Québec**
- **Former member of the COSEWIC species specialist subcommittee on terrestrial mammals**

GENEVIÈVE LESIEUR

WHAT THE NOMINATORS SAID

Since 2008, Martin-Hugues St-Laurent has led a research program on the impacts of natural disturbances and human disruptions on large mammal habitats and ecology. His research work, anchored in the forests of Quebec, focuses on the responses to habitat alteration and climate change of the Gaspé Peninsula's two ecotypes of caribou, their competitors (moose, deer) and their predators (wolf, bear and coyote).

As a leader in wildlife management and conservation research for the past 17 years, his life's work has been developing and guiding important conservation projects while working in close collaboration with First Nations representatives, government biologists and NGO conservationists.

Martin-Hugues has inspired many young biologists during his career, educating and mentoring innumerable graduate, doctoral and postdoctoral candidates. He has created a stable, safe and stimulating training environment, inspired by the principles of equity, diversity and inclusion. Guided too by the practical realities of network building and engaging in conservation (and future employment prospects), he strives to connect his students with real-world partners, including local Indigenous Peoples, industry members, working conservationists and government officials. He places a strong emphasis at the undergraduate level on the recruitment of first-generation students and is willing to adapt projects to their abilities and needs.

IN HIS OWN WORDS

I grew up in Rimouski, a small town in eastern Quebec, and I spent many wonderful moments on the shores of the St. Lawrence River. I loved exploring the sandbanks with my grandparents, catching all sorts of invertebrates and small fish and beginning to understand how they live. My father often took me to the woods, where I learned about trees, birds and mammals. In short, my connection to wildlife stems from my roots in a small town surrounded by diverse natural habitats and from a deep curiosity ingrained in me to always learn more. Since then, I've studied biology and spent many summers (and winters!) in the field collecting data — living in nature throughout the seasons and sometimes harsh weather.

I love challenging myself to understand the complex mechanisms that link animal species to their environment. I am driven especially to identify solutions to supporting the sound management, recovery and conservation of mammals, so many of which hold a special place in Canada's natural heritage. A career in conservation science is rewarding but can also be frustrating and exhausting. But we cannot give up. We must keep working to offer our science-based alternatives and solutions as we rethink our relationship with nature.

Today, more than ever, nature, wildlife and the environment need us to survive. Through our efforts to better understand the living world, we are working to unravel the mechanisms driving biodiversity loss and to identify plausible solutions to reverse these losses in order to protect the world's rich and fragile natural heritage.

This award was established in 1978 by the Canadian Wildlife Federation as a tribute to the former governor-general of Canada, an outstanding outdoorsperson and past honorary president of the federation. It is presented to individuals who have demonstrated a commitment to effective and responsible activities that promote, enhance and further the conservation of Canada's natural heritage.

WADE LUZNY YOUTH CONSERVATION AWARD

Green **Herons**

→ St. Catharines, Ontario

WHAT THE NOMINATORS SAID

I nominate the Green Herons for the Luzny youth award in recognition of their extraordinary dedication to environmental sustainability and conservation action. A youth education program, it provides conservation opportunities for young people across the Niagara region through projects that protect natural spaces and native species.

This passionate group of students aged 7-12, led by Lindsay Currie, has demonstrated an exceptional commitment to protecting wildlife habitat and fostering environmental stewardship. Their activities are exemplified in their video *Time for Action*, available on YouTube.

The group's efforts in raising awareness, leading grassroots conservation campaigns and organizing clean-ups have significantly improved local ecosystems and inspired others to act. In partnership with local and national environmental organizations, they have helped create many butterflyway gardens, native gardens and hundreds of native tree plantings. They spread their impact by distributing 800 native seed packs. The Green Herons are shaping the future of conservation in meaningful ways.

FOR THE GROUP

DANE CURRIE, AGE 12

When schools closed in 2020, my brother and I started a club to help the environment and learn about the species that live in southern Ontario. The day we were trying to come up with a name, we found a green heron in a local wetland. I drew a logo on a piece of cardboard, and our club was born. We followed Jane Goodall's Roots and Shoots program, which encourages youth to go outside, find problems the local wildlife face and do projects to fix them.

Nature has always been what I have been interested in since I can remember. Once you have some experiences up close with wildlife, the connection to the natural world just keeps getting stronger.

I would like to thank our community for helping to turn our club into what it has become today. We always had help from our parents, our neighbours, local businesses and the conservation authority when we had ideas for projects.

There's lots kids can do. Learn what wildlife exists in your neighbourhood. Or figure out what plants should be in your yard and which ones shouldn't. There are lots of organizations (and kids) you can connect with and learn from. When you look, you will find great people who are taking action in a lot of different ways. It's a great community to be a part of, and there is positive momentum happening everywhere right now.

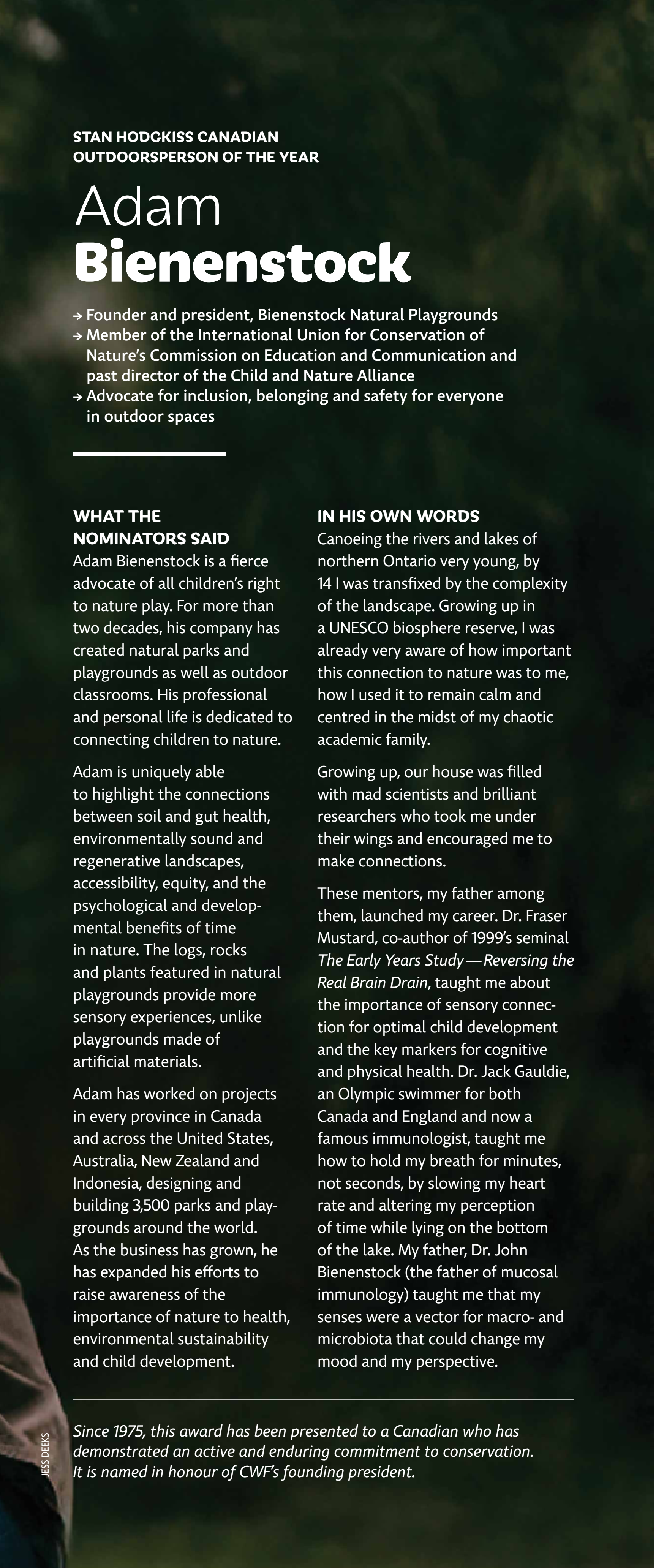
This award recognizes youth or youth groups (18 and under) who have undertaken habitat and conservation projects or activities.

The Green Heron

JOEL RODRIGUEZ

THE GREEN HERONS

JOEL RODRIGUEZ


JESS DEEKS

STAN HODGKISS CANADIAN OUTDOORSPERSON OF THE YEAR

Adam **Bienenstock**

→ Founder and president, Bienenstock Natural Playgrounds
→ Member of the International Union for Conservation of Nature's Commission on Education and Communication and past director of the Child and Nature Alliance
→ Advocate for inclusion, belonging and safety for everyone in outdoor spaces

WHAT THE NOMINATORS SAID

Adam Bienenstock is a fierce advocate of all children's right to nature play. For more than two decades, his company has created natural parks and playgrounds as well as outdoor classrooms. His professional and personal life is dedicated to connecting children to nature.

Adam is uniquely able to highlight the connections between soil and gut health, environmentally sound and regenerative landscapes, accessibility, equity, and the psychological and developmental benefits of time in nature. The logs, rocks and plants featured in natural playgrounds provide more sensory experiences, unlike playgrounds made of artificial materials.

Adam has worked on projects in every province in Canada and across the United States, Australia, New Zealand and Indonesia, designing and building 3,500 parks and playgrounds around the world. As the business has grown, he has expanded his efforts to raise awareness of the importance of nature to health, environmental sustainability and child development.

IN HIS OWN WORDS

Canoeing the rivers and lakes of northern Ontario very young, by 14 I was transfixed by the complexity of the landscape. Growing up in a UNESCO biosphere reserve, I was already very aware of how important this connection to nature was to me, how I used it to remain calm and centred in the midst of my chaotic academic family.

Growing up, our house was filled with mad scientists and brilliant researchers who took me under their wings and encouraged me to make connections.

These mentors, my father among them, launched my career. Dr. Fraser Mustard, co-author of 1999's seminal *The Early Years Study—Reversing the Real Brain Drain*, taught me about the importance of sensory connection for optimal child development and the key markers for cognitive and physical health. Dr. Jack Gauldie, an Olympic swimmer for both Canada and England and now a famous immunologist, taught me how to hold my breath for minutes, not seconds, by slowing my heart rate and altering my perception of time while lying on the bottom of the lake. My father, Dr. John Bienenstock (the father of mucosal immunology) taught me that my senses were a vector for macro- and microbiota that could change my mood and my perspective.

Since 1975, this award has been presented to a Canadian who has demonstrated an active and enduring commitment to conservation. It is named in honour of CWF's founding president.

ROBERT BATEMAN AWARD

Dale **Poulter**

→ Longtime nature photographer and dedicated "community scientist"

WHAT THE NOMINATORS SAID

Dale Poulter's love of nature is captured in her stunning photographs and her careful studies of wildlife.

Her recent article, chronicling 40 years of observing common loons on Pike Lake, includes stunning and rarely seen images of close-up encounters with loons through all three of the seasons they spend in Canada.

A committed citizen scientist, Dale has photographed and documented more than 600 entries on iNaturalist.ca, including 400 "research-grade" photographs.

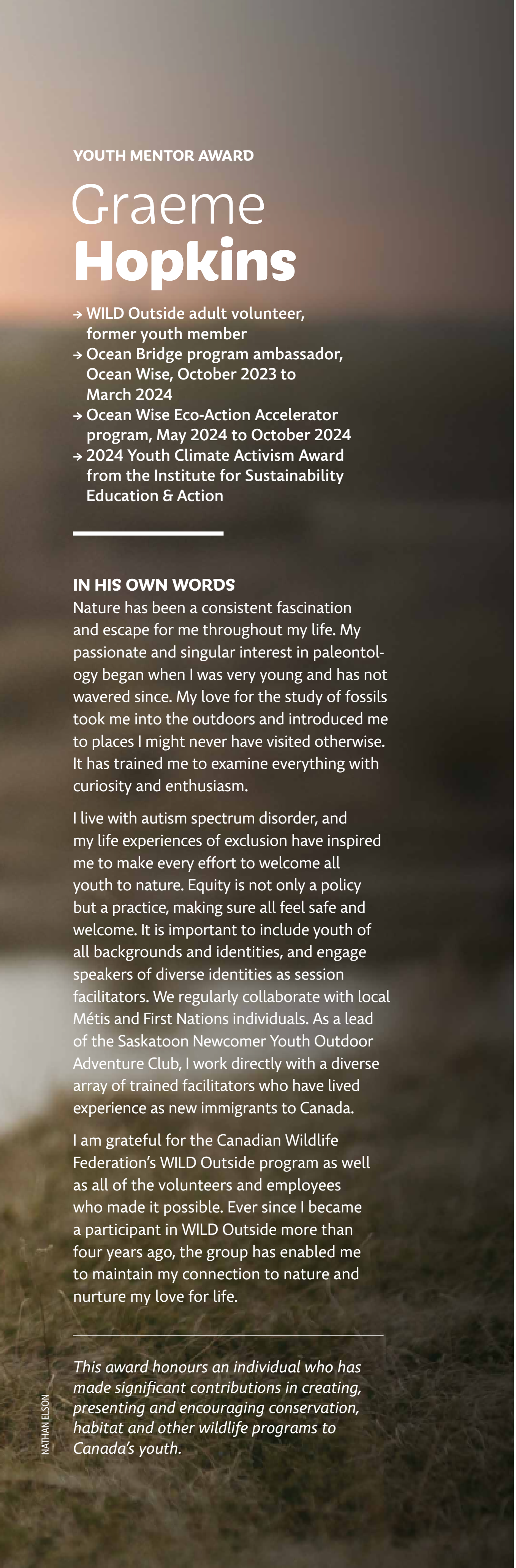
IN HER OWN WORDS

Connecting with nature is my passion. I feel peace and calmness in my life when in the outdoors. I feel my mind is connected with nature.

I am so grateful to Bart, my husband of 53 years, for his patience in listening to my latest exciting discovery and for helping me judge my photos—also, of course, for being there for me when I ask him yet again to come out to see something I found interesting.

To commemorate its 50th anniversary, CWF established this award to recognize those who, through artistic expression, have raised the awareness of and appreciation for Canada's wildlife and their habitats.

DANE ROY



NATHAN ELSON

YOUTH MENTOR AWARD

Graeme **Hopkins**

- WILD Outside adult volunteer, former youth member
- Ocean Bridge program ambassador, Ocean Wise, October 2023 to March 2024
- Ocean Wise Eco-Action Accelerator program, May 2024 to October 2024
- 2024 Youth Climate Activism Award from the Institute for Sustainability Education & Action

IN HIS OWN WORDS

Nature has been a consistent fascination and escape for me throughout my life. My passionate and singular interest in paleontology began when I was very young and has not wavered since. My love for the study of fossils took me into the outdoors and introduced me to places I might never have visited otherwise. It has trained me to examine everything with curiosity and enthusiasm.

I live with autism spectrum disorder, and my life experiences of exclusion have inspired me to make every effort to welcome all youth to nature. Equity is not only a policy but a practice, making sure all feel safe and welcome. It is important to include youth of all backgrounds and identities, and engage speakers of diverse identities as session facilitators. We regularly collaborate with local Métis and First Nations individuals. As a lead of the Saskatoon Newcomer Youth Outdoor Adventure Club, I work directly with a diverse array of trained facilitators who have lived experience as new immigrants to Canada.

I am grateful for the Canadian Wildlife Federation's WILD Outside program as well as all of the volunteers and employees who made it possible. Ever since I became a participant in WILD Outside more than four years ago, the group has enabled me to maintain my connection to nature and nurture my love for life.

This award honours an individual who has made significant contributions in creating, presenting and encouraging conservation, habitat and other wildlife programs to Canada's youth.

PAST PRESIDENTS' CANADIAN LEGISLATOR AWARD

Blaine **Calkins**

- Member of Parliament, Ponoka-Didsbury (formerly Red Deer–Lacombe) since 2006
- Chair of the Conservative hunting and angling caucus; shadow cabinet minister for hunting, fishing and conservation; member of the House of Commons committees on fisheries and oceans, and on the environment and natural resources

WHAT THE NOMINATORS SAID

Canada's first-ever shadow minister for hunting, fishing and conservation, Calkins has advocated for conservation through the lens of hunters, anglers and trappers. Calkins advocates for responsible firearms ownership as a critical part of hunting and Canadian culture and respect for lawful gun owners.

Prior to political life, Calkins worked as an Alberta park ranger and as a national park warden. While attending university, he spent his summers working on and around Great Bear Lake.

IN HIS OWN WORDS

I have been an outdoorsman my entire life. Growing up on the family farm, I spent almost all my time outdoors, surrounded by birds and wildlife. At an early age, my dad got me hooked on fishing, which then grew into a passion for the outdoors. I was keenly interested in the biological sciences while earning my zoology degree from the University of Alberta.

Keep fighting for the things you believe in, and don't let failure stop you. Failure is just an opportunity to find new and creative ways to succeed.

Honouring one of Canada's great writers and conservationists, this award is presented to an individual or group for making a significant contribution to furthering the sport of angling and the conservation, the development and the wise use of Canada's recreational fisheries.

RODERICK HAIG-BROWN AWARD

Demiesha **Dennis**

→ Founder and director, Brown Girl Outdoor World
→ Advocate for inclusion, belonging and safety for everyone in outdoor spaces

WHAT THE NOMINATORS SAID

An accomplished angler, seasoned adventurer and passionate community advocate, Demiesha Dennis blends her love for the outdoors with her expertise to drive and foster substantial and positive change. She has become a dynamic leader and true trailblazer, fostering inclusivity and equity in the outdoors community.

Demiesha's work inspires, guides and motivates a new generation of outdoor enthusiasts and leaders to embrace and preserve the natural world.

Guided by her passion for being a voice that takes up and creates space in rooms where the representation of Black, Indigenous and racialized individuals remains under-represented, Demiesha serves on the advisory boards of several groups, including the Friends of Algonquin Park and the Ontario Federation of Anglers and Hunters.

IN HER OWN WORDS

My connection to wildlife and nature is deeply rooted in my upbringing and the landscapes that shaped me. Growing up in Jamaica, nature wasn't something separate; experiencing it was part of daily life. My grandmother, Ethlyn Dennis, was my first mentor in nature. She taught me the names of trees and birds, how to read the weather to know when to plant and when to harvest. That shaped my connection to the land and continues to guide me today.

Moving to Canada 25 years ago forced me to learn new ways of engaging with the land while carrying the deep respect and reverence instilled in me from childhood. My presence in the natural world was the exception from the norm. That absence sent a message that belonging in nature had to be earned. I refuse to allow that narrative to continue existing and wholeheartedly refuse to let that be passed down.

I do this work today to ensure that more people, especially those who have been historically excluded, know that the responsibility of knowing, loving and protecting the natural world is a gift. I want to leave a legacy that sees a collective of humans who decided that this planet was worth saving and decided to do the work.

Honouring one of Canada's great writers and conservationists, this award is presented to an individual or group for making a significant contribution to furthering the sport of angling and the conservation, development and wise use of Canada's recreational fisheries.

BRIANNA ROYE

HOW DOES A RIVER JUST DISAPPEAR? + WHY WALKING IN THE WOODS MAKES YOU HAPPY
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Life and Death in the Boreal Forest
CANADIAN WILDLIFE FEDERATION

THE INCREDIBLENESS OF HUMMINGBIRDS + URBAN EQUITY: OUR CITIES' NEED FOR GREEN
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GREAT SHOTS!
The best of CWF's annual photo contest
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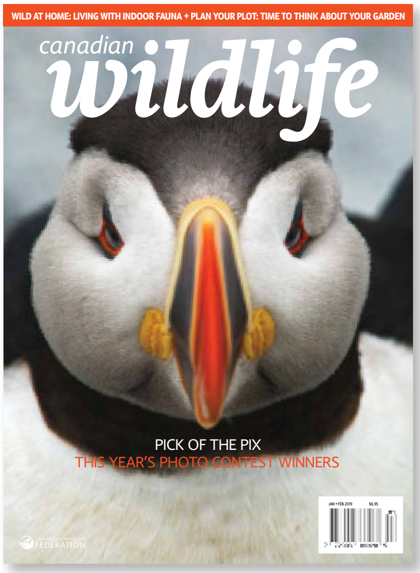
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BIRDING

Talking Turkeys

Wild turkeys are causing havoc in major Quebec and Ontario cities. And it looks like they aren't going anywhere

A GROWING NUMBER OF CANADIAN CITIES have a wild turkey problem. Considered all but extirpated in southern Ontario and Quebec back in 1909, largely due to massive forest clearing and unregulated hunting, today they are back. And they are appearing in cities like never before, including Montreal, Ottawa and Toronto, and growing in numbers. So, where did they come from and why are they there? Are they dangerous? And how do we best deal with them?

Actually, they are there because they were "invited." Efforts to restore wild turkey populations in Ontario as a species to be hunted began in earnest in the 1980s. The first wild turkeys had begun to appear in Quebec a decade earlier, likely from populations expanding northward from reintroduction programs by hunting organizations in New York and Vermont.

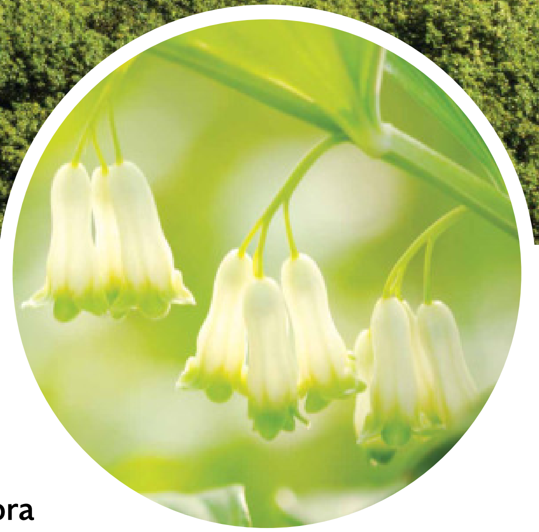
As temperatures rose with global heating, milder winters meant more birds emigrated north. Their numbers really got a boost from 2003 to 2013 when the Quebec government released 600 wild turkeys into the province, again to introduce game species for hunters. As part of that process, Quebec launched an experimental spring turkey hunt, which led to a regular hunting season that started in the spring of 2008. In 2023, more than 25,000 permits were sold and upwards of 10,000 turkeys harvested.

Wild turkeys are not stupid birds. They soon realized that cities were safer: humans were shooting at them in suburban and urban areas, and there weren't any large predators to worry about. As omnivores that can and will ingest anything from salamanders to birds' eggs, they found copious food in backyard gardens, fruit trees, shrubs and overflowing bird feeders; perfect conditions for a wild turkey invasion.

While some nature-loving citizens appreciate the presence of these interesting new neighbours, not all urbanites are enamoured of the idea. For good reason. When testosterone is raging through the bloodstream of big tom turkeys in the spring, they are aggressive territorially, even toward small pets and humans. They are also confused by built spaces and will relentlessly attack their own reflections on shiny surfaces. I am sure the wild turkey that crashed through the picture window of a seniors' residence in southern Quebec last spring and ran amok inside was attacking its own image.

If you do not want wild turkeys in your yard, then simply do not encourage them by leaving out pet food or putting out bird feeders in their presence. Fences are not that effective because wild turkeys can fly when needed. They are, however, somewhat afraid of large dogs. If you do not mind spending some money, noisy water jets from those motion-sensitive "scarecrows" attached to a garden hose are effective at discouraging them. If you do find yourself up close and personal with an aggressive tom, throwing tennis balls at him or opening a large umbrella should serve to shoo him away.

Other than such instances of aggression, wild turkeys are really cool, especially when those big toms show off those huge tails! The likelihood is they are now permanent residents in these cities. Best to prepare for the intrusions, even as we celebrate additions to our urban biodiversity.—**DAVID BIRD**



FIELD GUIDE

Solomon's Seal

A graceful perennial crucial to Quebec's native flora

THE MOUNTAIN AT THE HEART OF THE City of Montreal is beloved by both locals and tourists. There is a constant flow of visitors in every season to the impressive Kondiaronk Belvedere at the top. The semicircular plaza and sprawling "chalet" overlooking the downtown is named in honour of the Tionontati chief who played a pivotal role in the Great Peace of Montreal of 1701.

Most people, even those of us who grew up here, don't realize that Mont Royal has three peaks: the above is known formally as Colline de la Croix (for the cross at the top, originally placed there in 1643 by a first founder of Montreal); it is the highest at 233 metres. To the north, hides Colline d'Outremont at 211 m. On the western side, the third peak, Westmount Summit reaches 201 m. It stands above a surrounding plateau before dropping away down steep slopes on all sides. Another, lesser-known lookout on its southern face provides views out over the South Shore and the Eastern Townships. At its very top stands one of the city's most precious and least known greenspaces.

Summit Woods, as it is now known, is an intact oak forest and prime birding location. A visit to iNaturalist.ca shows it is home to many animal species, among them some 20 different types of mammals, 150 bird species, many otherwise rare-to-the-area snakes and reptiles, and thousands of kinds of insects. Birdwatchers flock here during spring migration, as it is a popular rest stop for passing songbirds. There are many species of wild plants, fungi and flowers in the forested areas.

Among them is a fascinating rhizome: Solomon's seal, a graceful perennial native to temperate regions of the Northern Hemisphere. In Quebec, two types, *Polygonatum biflorum* (smooth Solomon's seal) and *Polygonatum pubescens* (hairy Solomon's seal), are found in the understorey of mature hardwood forests — deciduous and mixed — where they thrive in shaded areas rooted in moist and nutrient-rich soils. A member of the Asparagaceae

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SKIPPING BEDTIME

Sperm Whales don't need much rest to feel rested. They take short and frequent naps near the water's surface. But get this. They don't breathe or move while they're napping underwater. Crazy!

SLOW DOWN

While some animals like the Black Bear will hibernate when Old Man Winter rolls into their neck of the woods, others will go into shorter periods of inactivity, called torpor. That means that animals like the American Badger will drop their body temperature, rate of breathing and even their heartbeat to cut the amount of energy they need to survive the winter.

SLUMBER PARTIES

Sea Otters don't like to snooze alone. That's why they'll join paws when they feel sleepy. That way they'll be able to stay together as a group and won't drift away from each other. While you might see just a couple of Sea Otters slumbering together, they also love a slumber party with dozens joining the floating group! Can we join?!

16

HEAD IN THE CLOUDS

Have you ever woken up in the middle of the night standing in your parents' room or at the bathroom sink wondering how in the world you got there? Birds do the same thing, except they may wake up in a different province! Okay, it's a little more complicated than that. You see, birds can sleep with one eye open and only half the brain buzzing with activity while flying south for the winter. But they let themselves sleep this way only when air currents are rising to help keep them flying high.

YOU SNOOZE, YOU LOSE

Scientists have found that herbivores (animals that eat plants) get less shut-eye than carnivores (animals that eat meat) since they need to keep their energy up by chowing down on plants. Deer, for example, get only about three hours of sleep a day, which explains why they're so active at dusk.

17

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family, Solomon's seal is also known as David's harp and ladder-to-heaven. Common throughout the Laurentians, the Eastern Townships and parts of the St. Lawrence Valley, the plant's ability to flourish under dense canopy makes it crucial to forest biodiversity.

Growing up to 90 centimetres high, it is distinguished by its graceful arching stems with alternating leaves topped by delicate pairs of necked and pendulous tubular flowers. In the fall, its attractive foliage turns golden. The name "Solomon's seal" originates from the distinctive circular scars left on the plant's rhizomes: when old stems die back, they leave marks, resembling, it is said, the ancient seal of King Solomon. This linkage contributed to the plant's mystical reputation in European folklore, where it has long been used for protection, healing and spiritual purposes. Similarly, many Indigenous Peoples of Quebec recognized the plant's medicinal qualities. It was used to treat inflammation, and respiratory and digestive issues. Poultices made from the plant helped with bruises and joint pain. Today, caution is advised due to its potential toxicity to humans (though birds are avid eaters).

In the context of global heating and rapidly changing forest compositions, the resilience of native plants like Solomon's seal is increasingly important. Its expansive rhizome system helps prevent soil erosion and supports fungal networks essential to healthy woodland ecosystems.

Solomon's seal is a critical member of Quebec's native flora. Its presence in the rarefied air of Westmount's Summit Woods is a fitting reflection of its rich ecology, horticultural individuality and ancient traditional value. (So long.)

—MEL WALWYN

PETER LLEWELLYN RF / ALAMY STOCK PHOTO. MKKERR / ISTOCK / GETTY IMAGES PLUS.

URBAN WILDLIFE

Take Me to the Rivers

Winnipeg's ever-changing relationship with its watery nature has one constant: "monkey trails"

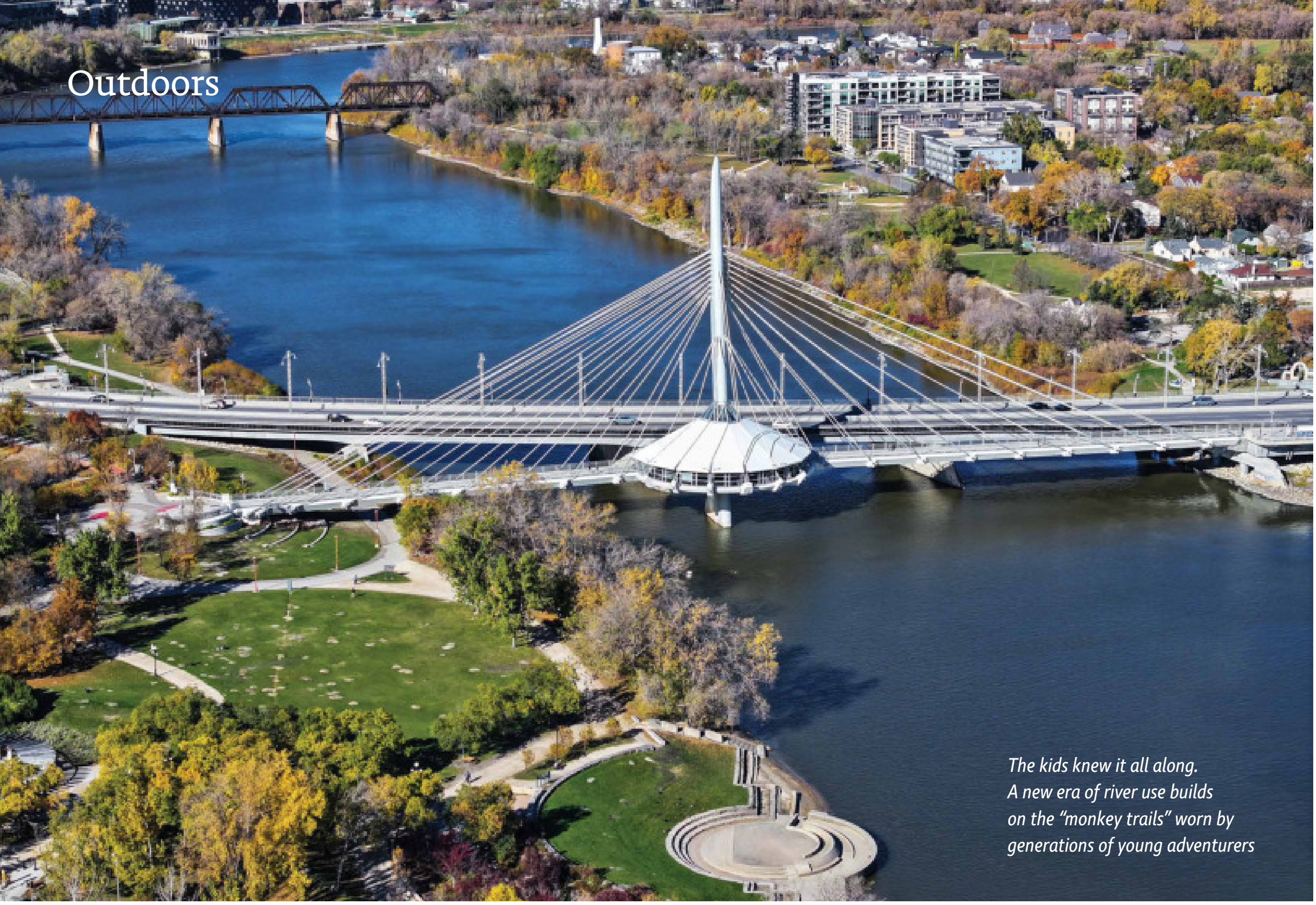
I WAS STANDING IN A PLAYGROUND IN DOWNTOWN TORONTO THE other day, keeping an eye on my two-year-old great-nephew, Calvin. It has been a long time since my daily duties included hanging by the swings minding little ones, so I had forgotten how conversations just start up among the attendant adults. A chat soon began when a young dad introduced himself as we watched our two charges start to play together.

Somehow it came up that he had grown up in Winnipeg, which afforded me a chance for a little research for this column. "Me too," I said and asked him about cycling the "monkey trails." There was a beat, then a laugh of recognition, and then the memories and anecdotes. His stories of kids "bombing" around on bikes dated to the early '90s. My recollections, so similar in form and substance to his, date from the late '60s.

Winnipeg has a complicated relationship with its rivers

In those months of the year in Winnipeg when cycling is a good idea, it is actually a great idea. The place lends itself to biking, kilometres of flatness in every direction, with a growing network of protected and off-road pathways. Many of the large parks dotted around the city are connected by trails that follow the serpentine greenspace that limns the rivers. Twisting and winding alongside the flowing waters, with steep climbs and sharp descents to and from the shores, the paths lace the wooded areas beyond the oft-flooded banks. These are what Winnipeggers call the monkey trails.

An online dictionary finds the term specific to Western Canada, meaning pathways worn by playing children. Winnipeg's popular young



The kids knew it all along. A new era of river use builds on the "monkey trails" worn by generations of young adventurers

adult novelist John Danakas has used them as a backdrop in his novels.

I still recall long prairie summer evenings when a clutch of friends would meet at the corner after dinner and bike to "the river." By that we meant one of the unmarked spots in the neighbourhood where you could cut between houses down to the trails running beside the Assiniboine.

Winnipeg is and always has been defined by its four rivers: the Red, the Assiniboine and the lesser known La Salle and Seine. The city's name is derived from the Western Cree word *winipīhk*, meaning muddy water. The rivers' confluence is the reason humans have always gathered here.

It is seldom a good idea to build a permanent settlement at the lowest point of a massive floodplain, as early settlers learned during the Great Flood of 1826. The entire area was underwater, lives were lost, livelihoods destroyed.

But the people stayed because the worst floods happened only rarely: the next great one was not until 1950, when nearly 1,400 square kilometres ended up underwater, including fully one-eighth of the city area. That one caused hundreds of millions of dollars in damages to the built-up city, then Canada's fourth largest. It wiped out the roller-coaster my mother remembered from her childhood, along with all the parks, trails and favourite spots for swimming, picnics, even camping.

As in Toronto after Hurricane Hazel in 1954, that mid-century event served as the impetus for building infrastructure to handle future inundations. The city went about raising and fortifying its riverbanks, extending buffers out from the shoreline and beginning work on the Red River Floodway, a megaproject finally completed in 1968. Monkey trails proliferated in the newly protected riparian areas.

Since then, there has been a marked increase in extreme flooding in the region, including the watery catastrophe of 1997 that many Canadians (and Minnesotans and North Dakotans) still remember. While average annual precipitation in Manitoba has increased by about seven per cent since 1950, that small increase is not what has made Winnipeg more susceptible to flooding. In her 2011 book *Wet Prairie: People, Land, and Water in Agricultural Manitoba*, Shannon Stunden Bower, a professor of environmental history at the University of Alberta, chronicles the drive to get water off rural lands to maximize productivity. Unfortunately, in the realm of unintended consequences, these efforts to create agricultural prosperity upstream led to serious flooding downstream in the city.

In a trend witnessed in cities across Canada, Winnipeg's rivers went from having an essential role in the early economic and cultural life of the city at the start of the 20th century to being filthy, unappealing barriers to "progress" in the 1950s. Only in the past few decades have Canadian cities come to value their rivers and lakefronts again. Today, they are considered key assets for a healthy and livable city.

The kids knew it all along. Successive generations of young adventurers on two wheels have blazed the monkey trails that brought Winnipeggers down to the river.—MATTHEW CHURCH

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*The forest is burning**

POST-WILDFIRE RESTORATION

Indigenous Gathering and Action Forum

This February, CWF, the University of Victoria and partners invited Indigenous experts and specialists from Canada, Europe and the United States to share practical experiences and insights about restoring ecosystems after wildfires have occurred. An Indigenous gathering hosted by the First People's house preceded the post-wildfire workshop at the University of Victoria. The First Peoples House at the University of Victoria is a social, cultural and academic centre dedicated to Indigenous students. We acknowledge and respect the ləkʷəŋən (Songhees and Esquimalt) Peoples on whose territory the University of Victoria stands, and the ləkʷəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day. We are extremely grateful for our host nations, the University of Victoria, First Peoples' House, and the Elders who welcomed us to share our collective knowledges.

Carolyn Callaghan, CWF senior conservation biologist, terrestrial wildlife, and Tiffany Traverse, Indigenous researcher, land and seed steward, and member of the Secwépemc Nation (Kenpesq't), tell us more.

*Translated by ləkʷəŋən elder Sophie Misheal as reviewed by Elmer George, Andrew Cienski and Ed Thomas

Carolyn: *Why did CWF and partners host the wildfire workshop?*

As wildfires become increasingly common under climate change conditions, the need for strategic and actionable plans for habitat restoration is vital to community and ecological resilience. In 2023, a record 17.3 million hectares of Canadian wild land burned, an area three times the size of Prince Edward Island. Fires destroyed wildlife habitat, likely killed millions of nesting birds and other animals, and released critical stores of carbon into the atmosphere. Wildfires also destroyed homes, damaged towns, and significantly impacted Indigenous communities. As fire extent and intensity continues to increase, conservation of biodiversity and the adaptation of plants and animals to climate change will depend on the post-fire recovery of vital and resilient landscapes and ecosystems. Though some habitats can recover through persistent seeds and roots, the most heavily impacted areas require active restoration for timely recovery. Canada is ill equipped to respond to the restoration needs of large-scale wildfires. There is a need for a science-based restoration strategy and action plan that will help communities become more resilient to impacts of wildfires and enable ecosystems to recover more quickly.

This project aims to develop a comprehensive strategy and action plan for restoring landscapes devastated by wildfires. Currently, there is an inadequate supply of native plant seeds and limited capacity for local communities to actively restore landscapes devasted by wildfires. The Indigenous gathering and the workshop informed the development of a strategy and action plan to help communities, governments and others restore and stabilize landscapes, adapt to and mitigate climate change impacts, and conserve biodiversity for future generations. In 2021-2024, CWF created the framework for a national native seed strategy, and this Indigenous gathering and workshop was a great next step to putting the plan into action.

Carolyn: *What was unique about these events?*

We invited a small group of about one hundred specialists and the events began with a private gathering of Indigenous fire-keepers and Indigenous specialists to share knowledge and discuss their communities' specific needs and solutions. The next day, the participants from the Indigenous gathering presented a report on the proceedings to inform the workshop and participated fully in it. Restoration specialists, native seed experts, researchers, and other communities impacted by wildfires from across Canada, Europe, and the USA met to weave Indigenous knowledge with global wildfire restoration research to inform the development of a strategy and action plan that addresses post-fire revegetation needs and outlines best practices and capacity needs. It's critical that international organizations collaborate because climate change is impacting everyone.

The focus was on immediate needs and opportunities for practical, community-informed science-based interventions, ensuring outcomes that help local communities and governments restore vital ecosystems, enhance resilience to climate change, and conserve biodiversity for future generations.

Tiffany: *What was the significance of beginning the events with an Indigenous gathering?*

The significance of starting the forum with an Indigenous-only gathering was important, and long overdue. Many times, Indigenous peoples are left out of decision-making and leadership when it comes to restoration and conservation. We set out to change that. Since Indigenous peoples are the original stewards of these lands, the Advisory Committee thought it would be incredibly important for Indigenous practitioners, knowledge holders, and stewards, to have a safer space to meet and discuss very specific issues, and successes, from our perspectives and worldviews. This was a way for us to lay the groundwork for very specific needs of the land and our respective communities (which are disproportionately over-represented in terms of wildfire disturbances, particularly in the BC interior). We had the opportunity to ground ourselves in ceremony, before tackling some pretty complex topics, and had the incredible support of the First Peoples' House, and our incredible Elders who hosted us. By having our voices heard Day One, we were able to carry forward very specific concerns forward, which had a strong focus on the health of the *tmicw* (land).

Carolyn: *Who are the supporters of this initiative?*

The work is undertaken with generous financial support from Mrs. Gretchen Bauta, the Weston Family Foundation, and Environment and Climate Change Canada. The Advisory Committee consisted of native seed and wildfire specialists, Indigenous scholars, and professors from the University of Victoria, including Dr. Richard Hebda, who co-led the initiative. The university also provided logistical support in event planning and hosted the events. The Canadian Wildlife Federation was pleased to be part of a team to spearhead this initiative. This work reflects our mission and vision for prioritizing native seed-based ecosystem restoration.

Carolyn & Tiffany: *What is next?*

Following the workshop, CWF, University of Victoria, and partners will support case studies on post-wildfire restoration and community needs to better understand capacity issues and seed-based restoration potential at the community level. The outcomes of this project will inform policies across all levels of government and contribute to improved preparation and recovery efforts for future wildfires. It is our hope that the gathering and workshop forged greater connections between communities and experts and these connections will create greater capacity to share knowledge and take action. The public will be able to review the results of the meetings when a strategy is released this summer.

Right Here

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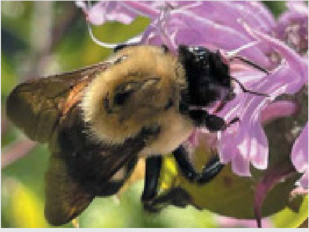
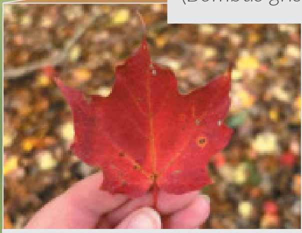


Brown-belted Bumble Bee
(Bombus griseocollis)



Sugar Maple
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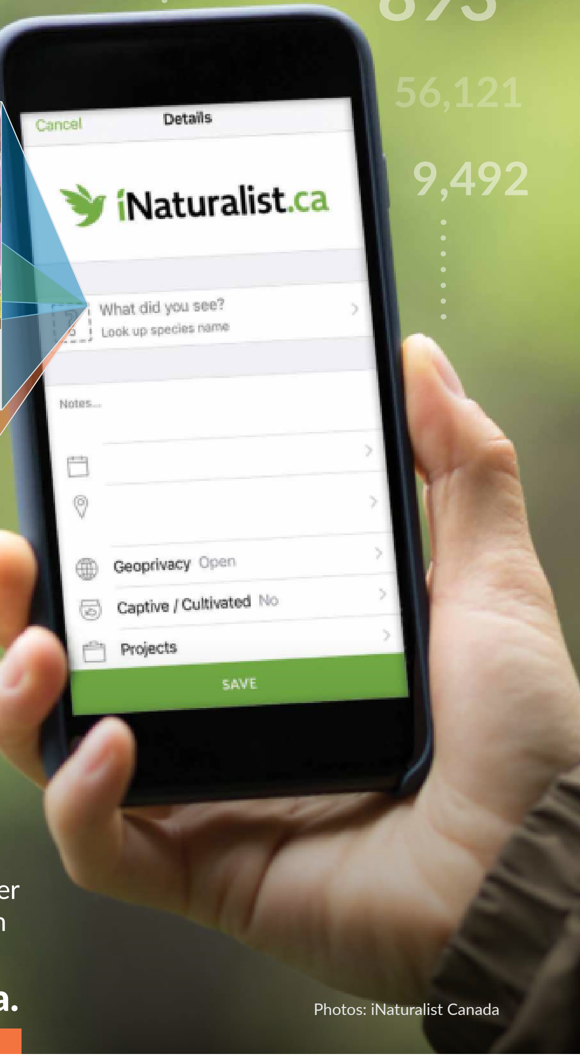
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